

TRANSMITTAL FORM

Application Serial Number	10/691,007
Filing Date	October 22, 2003
First Named Inventor	Lochtefeld
Group Art Unit	2812
Examiner Name	Not yet assigned
Attorney Docket No.	ASC-060
Patent No.	Not applicable
Issue Date	Not applicable

ENCLOSURES *(check all that apply)*

- ☐ Fee Transmittal Form
 - ☐ Check Attached
 - ☐ Copy of Fee Transmittal Form
- ☐ Amendment/Response
 - ☐ Preliminary
 - ☐ After Final
 - ☐ Affidavits/declaration(s)
 - ☐ Letter to Official Draftsperson including Drawings [Total Sheets _____]
- ☐ Petition for Extension of Time
- ☒ Information Disclosure Statement
 - ☒ Form PTO-1449
 - ☒ Copies of IDS Citations
- ☐ Certified Copy of Priority Document(s)
- ☐ Sequence Listing submission
 - ☐ Paper Copy/CD
 - ☐ Computer Readable Copy
 - ☐ Statement verifying identity of above
- ☐ Copy of Notice to File Missing Parts of Application
- ☐ Formal Drawing(s)
- ☐ Request For Continued Examination (RCE) Transmittal
- ☐ Power of Attorney (Revocation of Prior Powers)
- ☐ Terminal Disclaimer
- ☐ Executed Declaration and Power of Attorney for Utility or Design Patent Application
- ☐ Small Entity Statement
- ☐ CD(s) for large table or computer program
- ☐ Amendment After Allowance
- ☐ Request for Certificate of Correction
 - ☐ Certificate of Correction (in duplicate)
- ☐ Notice of Appeal to Board of Patent Appeals and Interferences
- ☐ Appeal Brief (in triplicate)
- ☐ Status Inquiry
- ☒ Return Receipt Postcard
- ☒ Certificate of First Class Mailing under 37 C.F.R. 1.8
- ☐ Certificate of Facsimile Transmission under 37 C.F.R. 1.8
- ☐ Additional Enclosure(s) *(please identify below)*

CORRESPONDENCE ADDRESS

Direct all correspondence to:

Patent Administrator
Testa, Hurwitz & Thibeault, LLP
High Street Tower
125 High Street
Boston, MA 02110
Tel. No.: (617) 248-7000
Fax No.: (617) 248-7100

SIGNATURE BLOCK

Respectfully submitted,

Date: April 5, 2004

Reg. No. 44,381
Tel. No.: (617) 310-8327
Fax No.: (617) 248-7100

Natasha C. Us
Attorney for Applicant(s)
Testa, Hurwitz & Thibeault, LLP
High Street Tower
125 High Street
Boston, MA 02110

OIPE JC10
APR 08 2004
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S):	Lochtefeld *et al.*		
SERIAL NO.:	10/691,007	GROUP NO.:	2812
FILING DATE:	October 22, 2003	EXAMINER:	Not yet assigned
TITLE:	GATE MATERIAL FOR SEMICONDUCTOR DEVICE FABRICATION		

CERTIFICATE OF FIRST CLASS MAILING UNDER 37 C.F.R. 1.8

I hereby certify that this correspondence, and any document(s) referred to as enclosed herein, is/are being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 5th day of April, 2004.

Wendy Martin

Wendy Martin

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith are: Transmittal Form (1 page); Information Disclosure Statement (2 pages); Form PTO 1449 (2 pages); Copies of cited references B1-B2 and C1-C9; and a return receipt postcard.

OIPE JC10
APR 08 2004
PATENT & TRADEMARK OFFICE

PATENT
Attorney Docket No. ASC-060

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S):	Lochtefeld et al.		
SERIAL NO.:	10/691,007	GROUP NO.:	2812
FILING DATE:	October 22, 2003	EXAMINER:	Not yet assigned
TITLE:	GATE MATERIAL FOR SEMICONDUCTOR DEVICE FABRICATION		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. Copies of the publications and non-U.S. patents are enclosed.

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

☒ (1) within three (3) months of the **filing date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or

☐ (2) after the period defined in (1) but before the mailing date of a **final action** or a **notice of allowance** under 37 C.F.R. 1.311, and

☐ the requisite Statement is below, **OR**

☐ the requisite fee under 37 C.F.R. 1.17(p), namely **$180.00**, is included herein, or

☐ (3) after the mailing date of a **final action** or **notice of allowance** but before the payment of the **issue fee, AND**

☐ the requisite Statement is below, **AND**

☐ the requisite petition fee under 37 C.F.R. 1.17(p), namely **$180.00** is included herein.

It is respectfully requested that each of the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

STATEMENT

As required under 37 C.F.R. 1.97(e), Applicant(s), through the undersigned, hereby state either that **[check the appropriate space only if either (2) or (3) is checked on the previous page and the Statement is required]**:

☐ 1. Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application **not more than three months** prior to the filing of the Information Disclosure Statement; or

☐ 2. No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to **any individual** designated in 37 C.F.R. 1.56(c) **more than three months** prior to the filing of the Information Disclosure Statement.

Respectfully submitted,

Date: April 5, 2004
Reg. No. 44,381

Natasha C. Us
Attorney for Applicant(s)
Testa, Hurwitz, & Thibeault, LLP
High Street Tower
125 High Street
Boston, Massachusetts 02110

Tel. No.: (617) 310-8327
Fax No.: (617) 248-7100

VER 12/00
3048690-1

OIPE JC10
APR 08 2004
PATENT & TRADEMARK OFFICE

FORM PTO - 1449 SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTORNEY DOCKET NO.: ASC-060 APPLICANT(S): Lochtefeld *et al.* SERIAL NO.: 10/691,007 FILING DATE: October 22, 2003 GROUP: 2812

U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A1	5,227,664	07/13/1993	Ueno			
	A2	6,268,253 B1	07/31/2001	Yu			
	A3	6,383,879 B1	05/07/2002	Kizilyalli et al.			
	A4	6,429,061 B1	08/06/2002	Rim			
	A5	2002/0076886 A1	060/20/2002	Rotondaro et al.			

FOREIGN PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
	B1	0 784 339 A2	07/16/1997	EP				No	Yes
	B2	01/93338 A1	12/06/2001	WO				No	Yes

OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)
	C1 Imai *et al.* (May, 2002) "A 100 nm Node CMOS Technology for System-on-a-Chip Applications", IEICE Trans. Electron., Vol. E85-C, No. 5, pp. 1057-1063.
	C2 Park *et al.* (2002) "Gate Postdoping to Decouple Implant/Anneal for Gate, Source/Drain, and Extension: Maximizing Polysilicon Gate Activation for 0.1 μm CMOS Technologies", 2002 Symposium on VLSI Technology Digest of Technical Papers, pp. 134-135.
	C3 Reinking *et al.* (March, 1999) "Fabrication of high-mobility Ge p-channel MOSFETs on Si substrates", Electronics Letters,Vol. 35, No. 6, pp. 503-504.
	C4 Rim *et al.* (2002) "Characteristics and Device design of Sub-100 nm Strained SI N-and PMOSFETs", 2002 Symposium on VLSI Technology Digest of Technical Papers, pp. 98-99.
	C5 Su *et al.* (2000) "Strained $Si_{1-x}Ge_x$ graded channel PMOSFET grown by UHVCVD", Thin Solid Films, Elsevier Science, Vol. 369, No. 1-2, pp. 371-374.

EXAMINER	DATE CONSIDERED

FORM PTO - 1449 SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTORNEY DOCKET NO.: ASC-060 APPLICANT(S): Lochtefeld *et al.* SERIAL NO.: 10/691,007 FILING DATE: October 22, 2003 GROUP: 2812

U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)

OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.		OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)
	C6	Takagi *et al.* (August, 2001) "Strained-Si-on-Insulator (Strained-SOI) MOSFETs-Concept, Structures and Device Characteristics", IEICE Trans. Electron., Vol. E84-C, No. 8, pp. 1043-1050.
	C7	Wyon (2002) "Future technology for advanced MOS devices", Nuclear Instruments & Methods in Physics Research, Section - B: Beam Interactions With Materials and Atoms, North-Holland Publishing Company, Amsterdam, NL, Vol. 186, No. 1-4, pp. 380-391.
	C8	Xiang *et al.* (2000) "Very High Performance 40nm CMOS with Ultra-thin Nitride/Oxynitride Stack Gate Dielectric and Pre-doped Dual Poly-Si Gate Electrodes", International Electron Devices Meeting 2000 IEDM Technical Digest, pp. 860-862.
	C9	International Search Report for PCT/US03/33561, dated 3/24/2004

EXAMINER	DATE CONSIDERED

3048595